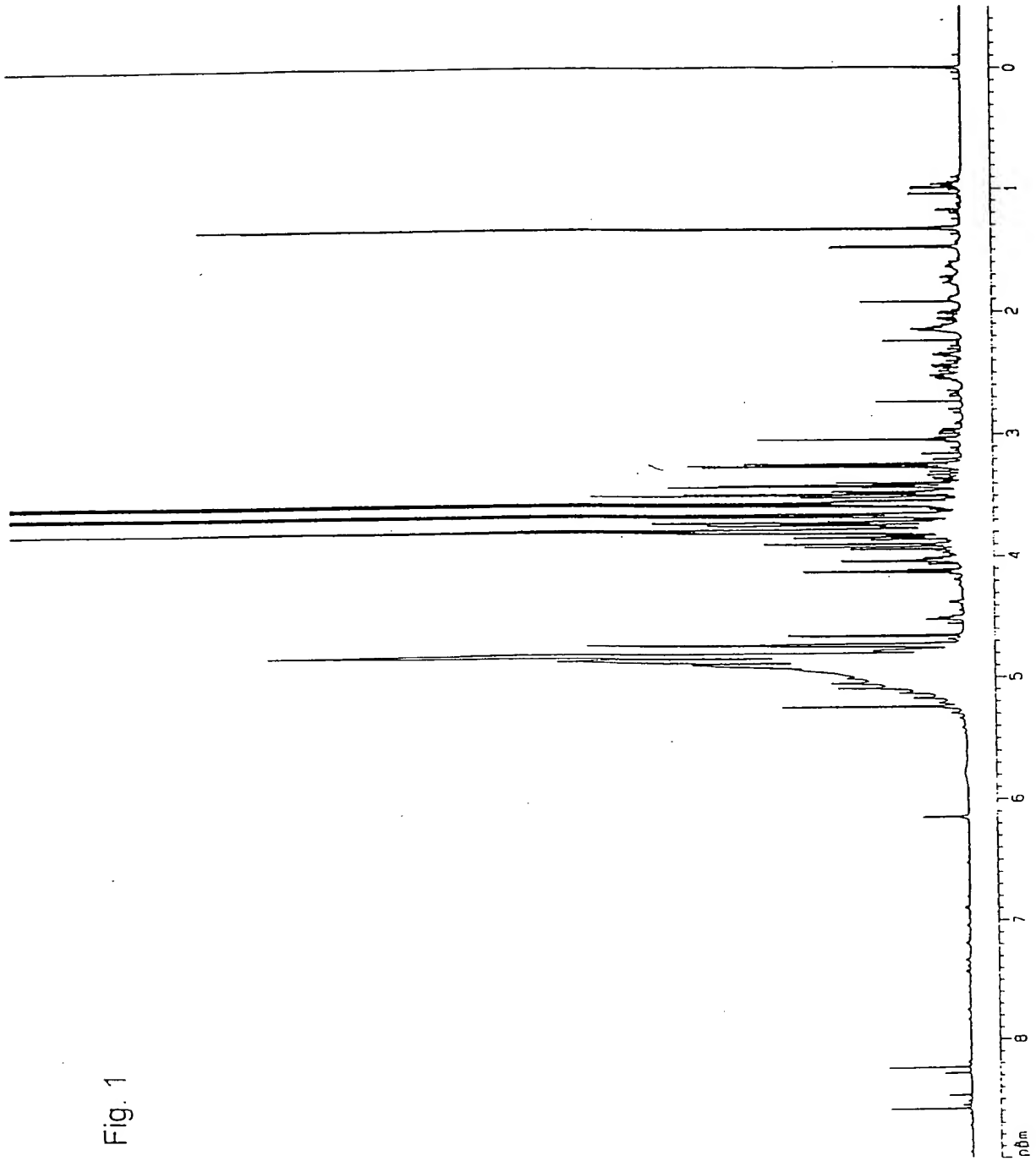
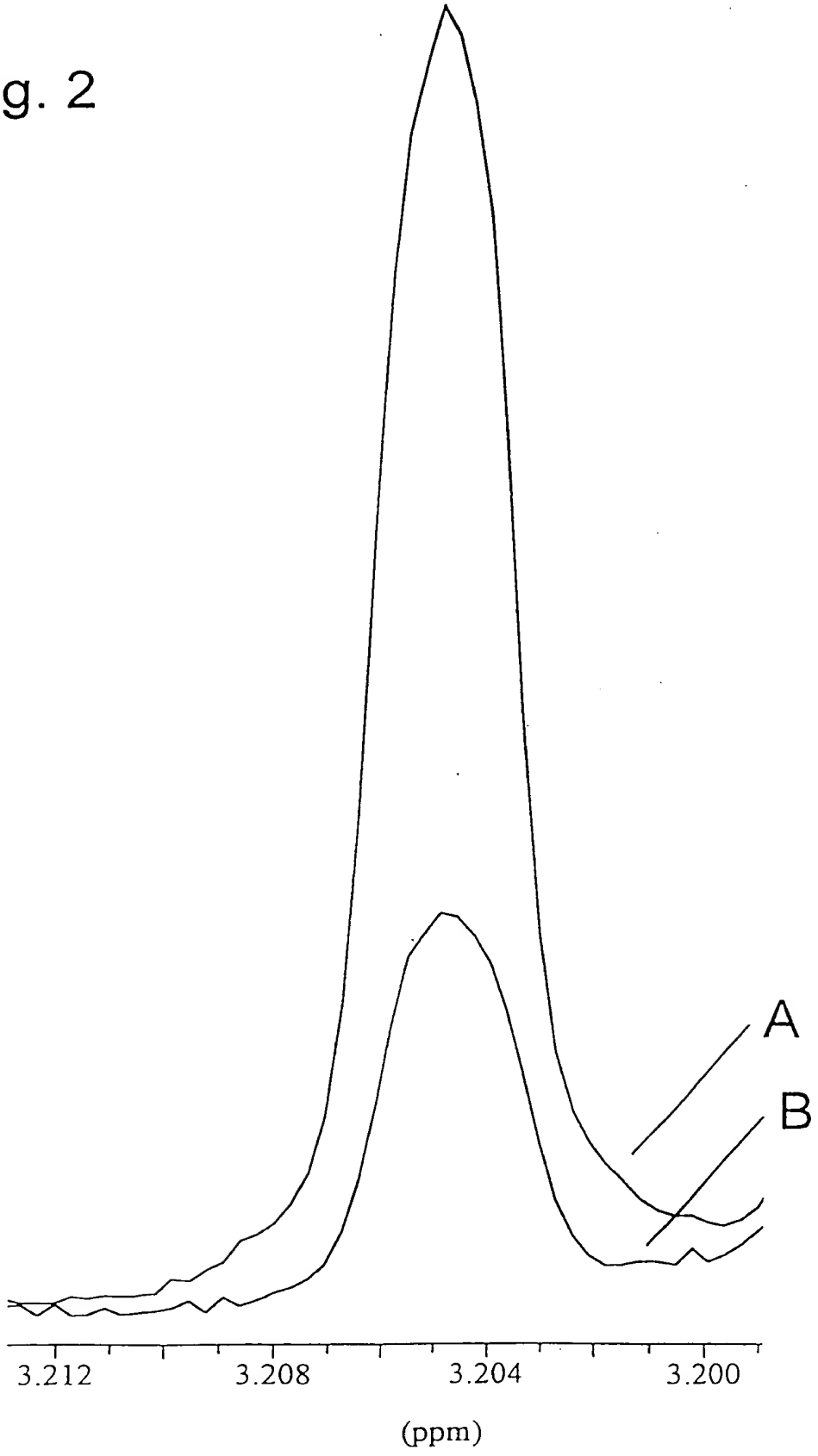



Fig. 1

Fig. 2



| total time period (0-35 h) | CCTD (> 22µmol/l) | CK (> 100 U/l) | CK-MB (≥ 6% of CK) | Myo (> 90 ng/ml) | cTnl/T (cTnl > 1,5 µg/l) |
|---|---|---|---|---|---|
| sensitivity | 96.6 % | 57.1 % | 57.1 % | 60.7 % | 69.5 % |
| specificity | 92.8 % | 71.4 % | 100 % | 64.2 % | 92.8 % |
| positive predictive value | 96.6 % | 80.0 % | 100 % | 77.2 % | 94.7 % |
| negative predictive value | 92.8 % | 45.4 % | 53.8 % | 45.0 % | 52.0 % |
| diagnostic efficiency | 95.4 % | 61.9 % | 71.4 % | 61.9 % | 70.4 % |

Fig. 3: Diagnostic valency of choline, choline derivatives, and trimethyl ammonium derivatives (CCTD) compared with other infarction markers during total time period (0-35 h).

Number of samples (n) infarction group: CCTD n=30, CK/CK-MB/myoglobin (Myo) n=28, troponin I/T (cTnI/T) n=23; control group: all markers n=14

| early phase of AMI (0-6 h) | CCTD (> 22µmol/l) | CK (> 100 U/l) | CK-MB (≥ 6% of CK) | Myo (> 90 ng/ml) | cTnl/T (cTnl > 1,5 µg/l) |
|---|---|---|---|---|---|
| sensitivity | 100 % | 37.5 % | 37.5 % | 62.5 % | 50.0 % |
| specificity | 92.8 % | 71.4 % | 100 % | 64.2 % | 92.8 % |
| positive predictive value | 94.7 % | 60.0 % | 100 % | 66.6 % | 87.5 % |
| negative predictive value | 100 % | 50.0 % | 58.3 % | 60.0 % | 65.0 % |
| diagnostic efficiency | 96.8 % | 53.3 % | 66.6 % | 63.3 % | 71.4 % |

Fig. 4: Diagnostic valency of choline, choline derivatives, and trimethyl ammonium derivatives (CCTD) compared with other infarction markers during the early phase of the AMI (0-6 h).

Number of samples (n) infarction group: CCTD n=18, CK/CK-MB/myoglobin (Myo) n=16, troponin I/T (cTnI/T) n=14; control group: all markers n=14

| early phase of AMI (0-3 h) | CCTD (> 22µmol/l) | CK (> 100 U/l) | CK-MB (≥ 6% of CK) | Myo (> 90 ng/ml) | cTnI/T (cTnI > 1,5 µg/l) |
|---|---|---|---|---|---|
| sensitivity | 100 % | 12.5 % | 12.5 % | 50.0 % | 28.5 % |
| specificity | 92.8 % | 71.4 % | 100 % | 64.2 % | 92.8 % |
| positive predictive value | 88.8 % | 20.0 % | 100 % | 44.4 % | 66.6 % |
| negative predictive value | 100 % | 58.8 % | 66.6 % | 69.2 % | 72.2 % |
| diagnostic efficiency | 95.4 % | 50.0 % | 68.1 % | 59.0% | 71.4 % |

Fig. 5: Diagnostic valency of choline, choline derivatives, and trimethyl ammonium derivatives (CCTD) compared with other infarction markers during the early phase of the AMI (0-3 h).

Number of samples (n) infarction group: CCTD n=8, CK/CK-MB/myoglobin (Myo) n=8, troponin I/T (cTnI/T) n=7; control group: all markers n=14

| late phase of AMI (7-35 h) | CCTD (> 22µmol/l) | CK (> 100 U/l) | CK-MB (≥ 6% of CK) | Myo (> 90 ng/ml) | cTnl/T (cTnl > 1,5 µg/l) |
|---|---|---|---|---|---|
| sensitivity | 91.6 % | 83.3 % | 83.3 % | 58.3 % | 100 % |
| specificity | 92.8 % | 71.4 % | 100 % | 64.2 % | 92.8 % |
| positive predictive value | 91.6 % | 71.4 % | 100 % | 58.3 % | 90.0 % |
| negative predictive value | 92.8 % | 83.3 % | 87.5 % | 64.2 % | 100 % |
| diagnostic efficiency | 92.3 % | 76.9 % | 92.3 % | 61.5% | 69.6 % |

Fig. 6: Diagnostic valency of choline, choline derivatives, and trimethyl ammonium derivatives (CCTD) compared with other infarction markers during the late phase of the AMI (7-35 h).

Number of samples (n) infarction group: CCTD n=12, CK/CK-MB/myoglobin (Myo) n=12, troponin I/T (cTnI/T) n=9; control group: all markers n=14